

Remarks

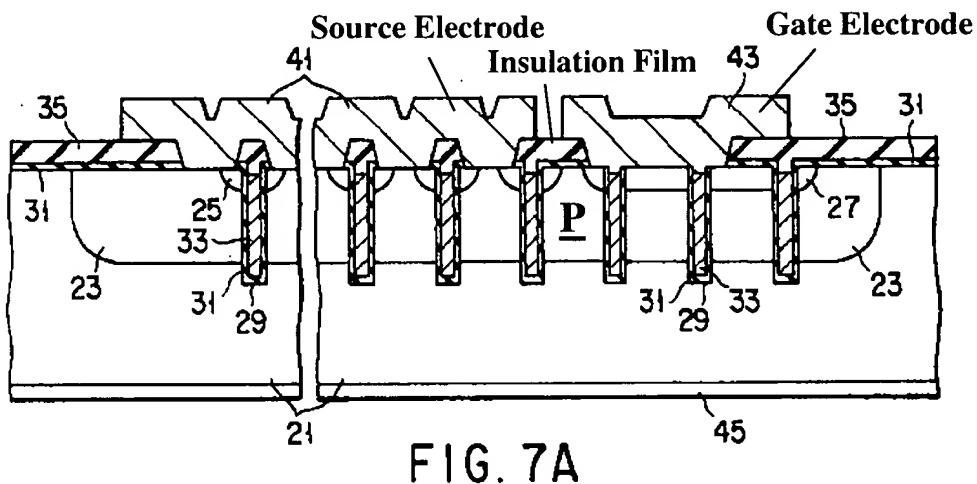
Claims 1 and 3-9 are pending. By this Amendment, claims 1 and 3 have been amended and claim 2 has been cancelled. No new matter is believed added.

Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Okumura (US 6,265,744). This rejection is defective because Okumura fails to teach each and every feature of the claims as required by 35 U.S.C. 102.

Regarding claim 1, Okumura fails to teach, among other features, a trench-gate semiconductor-body having active cell areas and inactive cell areas, wherein linking cells are provided “across the inactive and active areas, **wherein each linking cell has a first region contacted by the gate electrode and a source region contacted by the source electrode.**”

In the Response to Arguments section of the above-referenced Office Action, the Examiner alleges that the “solid layer between the trenches where there is a space between the source and gate electrode” corresponds to the claimed “linking cells.” Referring to FIG. 7A of Okumura (reproduced below), the “solid layer” referred to by the Examiner corresponds to the portion of the base region 23 labeled by Applicant as “P” in FIG. 7A. As shown, the gate electrode 43 contacts the surface of a n-type source region 25 formed in the portion P of the base region 23 located between the third and fourth trenches 29 from the right side of FIG. 7A. The source electrode 41, however, does **not** contact any portion of the surface of portion P of the base region 23, and does **not** contact any of the n-type source regions 25 formed in the portion P of the base region 23. On the

contrary, as is clearly illustrated in FIG. 7A of Okumura, the source electrode 41 is **insulated** from the portion P of the base region 23 by a section of the interlayer insulation film 35. The source electrode 41 is further insulated from the portion P of the base region 23 by the gate insulation film 31 lining the trench 29 located immediately to the left of the portion P in FIG. 7A.



Thus, the Examiner's statement in the Response to Arguments section of the above-referenced Office Action, that the "Okumura reference does disclose those limitations where the inactive and active areas have linking cells (solid layer between the trenches where there is a space between the source and gate electrode) where the gate is contacted by the gate electrode (33) and the source region is contacted by the source electrode (43) (Refer to Fig. 7A)" is clearly incorrect.

In the Response to Arguments section, **the Examiner misquoted an argument presented by Applicant** in the Request for Reconsideration filed June 6, 2003. In

particular, the Examiner states that “it is erroneous that the source electrode does not contact the base region or the source regions.” This is not what was (and still is) argued by Applicant. As stated above with regard to the above-reproduced FIG. 7A of Okumura, Applicant submits that the source electrode 41 does not contact any portion of the surface of portion **P** (i.e., the area of Okumura which the Examiner has equated with the claimed linking cells) of the base region 23, and does **not** contact any of the n-type source regions 25 formed in the portion **P** of the base region 23.

The Examiner asserts that in FIG. 7A of Okumura, “the source electrode does contact the portion **P** of the base region (23), which can be seen everywhere the insulation film is not located, in addition the source electrode is contacting the source regions also as is seen on the left side of the figure between the insulating films.” Applicant respectfully disagrees with the Examiner’s analysis. The portion of the base region 23 located between the third and fourth trenches 29 from the right side of FIG. 7A is the area Applicant has denoted as portion **P**. The source electrode 41 of Okumura clearly does not contact portion **P** of the base region 23. While the source electrode 41 does contact other portions of the base region (e.g., as shown on the left side of FIG. 7A), the source electrode 41 does not contact the portion **P** of the base region 23 located between the third and fourth trenches 29 from the right side of FIG. 7A, which the Examiner alleges corresponds to the claimed linking cells.

Accordingly, because Okumura fails to teach each and every feature of the claims, withdrawal of the rejection is respectfully requested.

If the Examiner believes that anything further is necessary to place the application in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney at the telephone number listed below.

Respectfully submitted,

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